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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,926	01/28/2002	Masanori Mizoguchi	Q68222	1457

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Washington, DC 20037-3213

EXAMINER

KIM, CHONG R

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/055,926	Applicant(s) MIZOGUCHI, MASANORI	
	Examiner Charles Kim	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-12,14-17 and 19-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8,10,11,15,17,19-26 and 28 is/are rejected.
- 7) ☒ Claim(s) 2-4,6,7,9,12,14,16,27 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/3/05,3/14/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment and Arguments

1. Applicant's amendment filed on March 9, 2005 has been entered and made of record.
2. In view of applicant's amendment, the claim objections are withdrawn.
3. Applicant's arguments, see pages 19-22, filed March 9, 2005, with respect to the rejection(s) of claim(s) 1-4, 8, 10-12, 15, 17 under 35 U.S.C. 103(a) as being unpatentable over the combination of Yamaguchi et al., E.P. Patent No 0797170 A1 and Bergenek et al., U.S. Patent No. 6,241,288 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the combination of Bergenek et al., U.S. Patent No. 6,241,288 ("Bergenek") and Suzuki et al., J.P Patent No. 2000-194854 ("Suzaki"), the details of which are provided below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 26-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claim 26, the phrase "wherein selects a plurality of fingerprint images" in lines 1-2 renders the claim indefinite because it is unclear what is being claimed. More

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specifically, it is unclear what selects the plurality of fingerprint images. It appears that the applicant intended the phrase to read, “wherein the fingerprint identification device selects a plurality of fingerprint images”. Similar rejections are applicable to claims 27-29. Appropriate corrections are required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 17, 19-21, 24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Referring to claim 17, the phrase “A fingerprint identification program in a fingerprint identification system” in lines 1-2 is considered non-statutory because the terminology “fingerprint identification program” alone has no set definition. A statutory product with descriptive material must include a positive recitation of the computer readable medium -- MPEP 2106. NOTE: For examination purposes, the phrase will be interpreted as “A fingerprint identification program stored in a memory in a fingerprint identification system”.

Claims not mentioned specifically are dependent from non-statutory antecedent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 10, 11, 17, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bergenek et al., U.S. Patent No. 6,241,288 (“Bergenek”) and Suzuki et al., J.P Patent No. 2000-194854 (“Suzaki”).

Referring to claim 1, Bergenek discloses a fingerprint identification system comprising:

a. a fingerprint identification terminal (1202-1212) which inputs a fingerprint image and transmits the fingerprint image, or feature vector data extracted from the fingerprint image, to a fingerprint identification device (1220-1240), the fingerprint identification device conducts fingerprint identification of the fingerprint image based on the feature vectors data transmitted from the fingerprint identification terminal (col. 12, lines 45-63 and figure 13. Note that the vectorization process in step 1212 extracts feature vector data from the fingerprint image; see col. 6, lines 54-col. 7, line 16 and figure 3);

b. the fingerprint identification terminal inputs a plurality of first fingerprint images obtained more than once for one finger, calculates image quality of the plurality of first fingerprint images (step 1204), and transmits information of the image quality to the fingerprint identification device (col. 12, lines 57-col. 13, line 57 and figure 13).

Bergenek explains that the multiple images could be compared to each other to improve image quality (col. 13, lines 5-7), but does not explicitly disclose that the fingerprint identification device selects a plurality of fingerprint images from the plurality of first fingerprint images based on the information of the image quality.

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Suzaki discloses the step of selecting a plurality of biometric images from a plurality of input biometric images based on information of image quality for collation processing purposes (pages 6-7, paragraphs 60-67).

Bergenek and Suzaki are combinable because they are both concerned with biometric identification imaging systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the system of Bergenek so that it selects a plurality of images from the plurality of first fingerprint images based on the information of image quality, as taught by Suzaki. The suggestion/motivation for doing so would have been to enhance the accuracy of the identification process by collating images that are limited to high quality images (Suzaki, page 2, paragraphs 7-9). Therefore, it would have been obvious to combine Bergenek with Suzaki.

Bergenek further discloses that the fingerprint identification device collates the feature vector data of the fingerprint images with feature vector data of one or more second fingerprint images stored in a fingerprint data base, obtains a plurality of collating results (geometric distance) for each of the plurality of selected fingerprint images, and conducts fingerprint identification determination based on the plurality of collating results (col. 16, lines 24-col. 17, line 7). Note that the combination of Bergenek and Suzaki (as discussed above) disclose the step of collating the feature vector data of the plurality of selected fingerprint images.

Referring to claim 10, see the rejection of at least claim 1 above.

Referring to claim 11, Bergenek and Suzaki do not explicitly disclose that the fingerprint terminal displays identification result data of the fingerprint images obtained by the fingerprint identification device. However, Official notice is taken that displaying identification result data

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of fingerprint images was exceedingly well known in the art. Therefore, it would have been obvious to display the identification result data of the fingerprint images in the method of Bergenek and Suzaki. The suggestion/motivation for doing so would have been to visually indicate that a match has been found between the fingerprint image data.

Referring to claim 17 as best understood, see the rejection of at least claim 1 above. Bergenek further discloses a fingerprint identification program stored in a memory in the fingerprint identification system (col. 5, lines 39-46).

Referring to claim 25, Bergenek discloses a fingerprint identification device (1220-1240) which conducts fingerprint identification of a fingerprint image based on a feature vector data transmitted from a fingerprint identification terminal (1202-1212), the fingerprint identification terminal inputs a fingerprint image and transmits the fingerprint image, or feature vector data extracted from the fingerprint image, to the fingerprint identification device (col. 12, lines 45-63 and figure 13. Note that the vectorization process in step 1212 extracts feature vector data from the fingerprint image; see col. 6, lines 54-col. 7, line 16 and figure 3), wherein

the fingerprint identification terminal inputs a plurality of first fingerprint images obtained more than once for one finger, calculates image quality of the plurality of first fingerprint images (step 1204), and transmits information of the image quality to the fingerprint identification device (col. 12, lines 57-col. 13, line 57 and figure 13).

Berenek explains that the multiple images could be compared to each other to improve image quality (col. 13, lines 5-7), but does not explicitly disclose that the fingerprint identification device selects a plurality of fingerprint images from the plurality of first fingerprint

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images based on the information of the image quality received from the fingerprint identification terminal.

Suzaki discloses the step of selecting a plurality of biometric images from a plurality of input biometric images based on information of image quality for collation processing (pages 6-7, paragraphs 60-67).

Bergenek and Suzaki are combinable because they are both concerned with biometric identification imaging systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the system of Bergenek so that it selects a plurality of images from the plurality of first fingerprint images based on the information of image quality, as taught by Suzaki. The suggestion/motivation for doing so would have been to enhance the accuracy of the identification process by collating high quality images (page 2, paragraphs 7-9). Therefore, it would have been obvious to combine Bergenek with Suzaki.

Bergenek further discloses that the fingerprint identification device collates the feature vector data of the fingerprint images with feature vector data of one or more second fingerprint images stored in a fingerprint data base, obtains a plurality of collating results (geometric distance) for each of the plurality of selected fingerprint images, and conducts fingerprint identification determination based on the plurality of collating results (col. 16, lines 24-col. 17, line 7). Note that the combination of Bergenek and Suzaki (as discussed above) disclose the step of collating the feature vector data of the plurality of selected fingerprint images.

7. Claims 8, 15, 20, 22, 23, 24, 26, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bergenek et al., U.S. Patent No. 6,241,288 ("Bergenek"),

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Suzaki et al., J.P Patent No. 2000-194854 (“Suzaki”), and Yamaguchi et al., European Patent No. 0797170 A1 (“Yamaguchi”).

Referring to claim 8, Bergenek and Suzaki do not explicitly disclose that the fingerprint identification device receives input of each feature vector data of a plurality of fingerprint image data for each of a plurality of fingers. However, this feature was exceedingly well known in the art. For example, Yamaguchi discloses a fingerprint identification device that receives input of feature vector data of a plurality of fingerprint image data for each of a plurality of fingers to output an identification result with a representative score calculated from the feature vector data of the plurality of fingerprint images of each finger in combination with a result of whether the representative score of each finger satisfies present conditions (col. 16, line 50-col. 17, line 4).

Bergenek, Suzaki, and Yamaguchi are combinable because they are all concerned with biometric identification imaging systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the fingerprint identification device of Bergenek and Suzaki in view of Yamaguchi’s teachings. The suggestion/motivation for doing so would have been to enhance the security in identifying a fingerprint (Yamaguchi, col. 14, lines 29-48). Therefore, it would have been obvious to combine Bergenek and Suzaki with Yamaguchi to obtain the invention specified in claim 8.

Referring to claims 15 and 20, see the rejection of at least claim 8 above.

Referring to claim 22, Bergenek and Suzaki disclose that the fingerprint identification system selects a plurality of fingerprint images from the plurality of first fingerprint images accordingly to the image quality, as noted above (claim 1), but they do not explicitly disclose that the images are selected in an order starting from the highest quality. However, this feature

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was exceedingly well known in the art. For example, Yamaguchi discloses a fingerprint identification system that selects a plurality of fingerprint images according to image quality in an order starting from highest quality image (col. 15, lines 3-16).

Bergenek, Suzaki, and Yamaguchi are combinable because they are all concerned with biometric identification imaging systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the fingerprint identification device of Bergenek and Suzaki in view of Yamaguchi's teachings. The suggestion/motivation for doing so would have been to enhance the security in identifying a fingerprint (Yamaguchi, col. 14, lines 29-48). Therefore, it would have been obvious to combine Bergenek and Suzaki with Yamaguchi to obtain the invention specified in claim 22.

Referring to claims 23, 24, 26, see the rejection of at least claim 22 above.

Referring to claim 28, see the rejection of at least claim 8 above.

Allowable Subject Matter

8. Claims 2-4, 6-7, 9, 12, 14, 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 27, 29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 571-272-7421. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

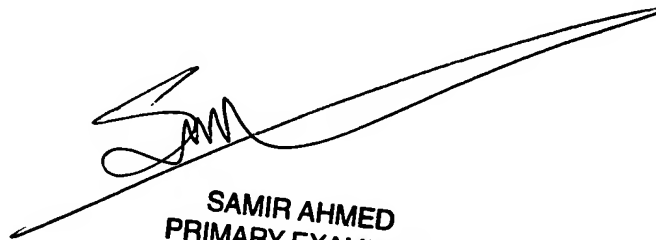
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ck

August 12, 2005



**SAMIR AHMED
PRIMARY EXAMINER**